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ABSTRACT

Information on opportunity to learn can be collected in national surveys primarily in terms of the written curriculum or the real curriculum (what is actually taught). Questions of this sort are asked in several national surveys, with the most comprehensive being in the National Education Longitudinal Survey of 1988. Other national surveys for which some curriculum information is collected include the National Assessment of Educational Progress, the Schools and Staffing Survey, and the Fast Response Survey System. The information collected on curriculum and course content in each of these surveys is described. The National Center for Education Statistics (NCES) will also begin to collect some information on topic coverage at the elementary school level with the Early Childhood Longitudinal Study in 1996. In a longer term project, the school quality project, the NCES will examine the measurement of opportunity to learn and how to collect data about it. These efforts will help create a better understanding of the definition and measurement of opportunity to learn. (SLD)

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Using Opportunity to Learn Items in Elementary and Secondary National Surveys

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A Presentation to the
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Information on opportunity to learn can be collected in national surveys primarily in terms of the written curriculum or in terms of the real curriculum. The written curriculum shows what the individual school or district plans on teaching its students, but may not reflect what is actually being taught in the classroom. One of the goals of the National Center for Education Statistics is to move closer to measuring the real or "implemented" curriculum. The real curriculum refers to what is actually taught in classrooms: content and topic coverage, time and emphasis devoted to different subject areas, course taking, and the context in which instruction occurs.

Questions about the curriculum and course content are asked in several national surveys. Perhaps the most comprehensive set of questions on opportunity to learn are asked in the National Educational Longitudinal Survey of 1988 (NELS:88). Other national surveys which collect some information on the curriculum include the National Assessment of Educational Progress (NAEP), the Schools and Staffing Survey (SASS), and the Fast

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Response Survey System. This paper will briefly describe the information collected on curriculum and course content in these surveys[1].

In addition, NCES has two planned new initiatives that will increase our understanding of opportunity to learn. The first of these is the planned Early Childhood Longitudinal Survey of 1996 (ECLS 96) which will investigate opportunity to learn in elementary schools. The second is a planned new project on the measurement of school quality, which will use innovative measurement and data collection methodologies in the context of national surveys to further our understanding of quality instruction and learning. One major component of this project is the measurement of opportunity to learn. This paper will conclude with a description of these two new projects.

Measurement of OTL in Current NCES Surveys

Although secondary school curriculum data were collected by NCES surveys as early as 1972 (National Longitudinal Survey of 1972 or NLS-72), it was not until 1988 that the National Education Longitudinal Study (NELS:88) began collecting curriculum information as early as the 8th grade. Both public and private school data (questionnaires and curriculum sensitive cognitive tests in four subject areas) were collected from 25,000 eighth graders in NELS:88. Data were also collected from each student's teachers, school principals, and parents. These nationally representative data are extremely powerful analytically. Not only

[1]The Third International Mathematics and Science Survey (TIMSS) is planning to collect extensive information on the opportunity for students to learn the content areas covered in the assessment. Because this assessment is the topic of another paper in this symposium, it will not be described here.

do all the component surveys provide contextual data for the student reports, but they can be linked to the individual student data as well. Items on all of the NELS:88 component questionnaires can provide information about students' opportunity to learn.

The NELS:88 school administrators reported very general information on curriculum and coursetaking including: major program orientation of the school (general academic, science/technology, arts, etc.); minimum academic instruction required of eighth graders in all academic areas; and the availability of gifted and talented programs in major academic areas as well as how students are chosen for these special programs.

The NELS:88 students reported on their course taking patterns and about their competency, interest, and grades in their various courses. They reported on their ability grouping in the core subjects, and their enrollment in advanced, enriched, or accelerated core courses, and their participation in any special programs such as gifted/talented and English as a Second Language. In the Fall of 1992, NCES collected high school transcripts from students who participated in the NELS study. This transcript study will provide an in-depth look at the coursetaking patterns of students who were eighth graders in 1988.

A great deal of information on opportunity to learn core subjects was collected from the NELS:88 teachers. The teachers provided in-depth reports of curriculum and course emphases, as well as descriptors of course content and classroom characteristics. Basic descriptors of all courses taught by teachers in the NELS:88 sample included title, achievement level of students, textbook choice and percent of textbook covered, use of instructional materials and amount of time spent per week using different forms of class instruction.

Additionally, in-depth teacher descriptions of the eighth grade core curriculum were collected in the four subject areas of English, mathematics, history, and science. Curriculum emphasis in English is reported in the areas of: grammar, literature, composition, reading and spelling, and are reported as major topics, minor topics, review topics, or non-existent. Curriculum emphasis in mathematics is reported in the areas of: common fractions, decimal fractions, ratio and proportion, percent, measurement, geometry, algebra, integers, probability and statistics, and problem solving. Access to and time usage of calculators is also collected. Science curriculum emphasis is reported in the areas of: plants, animals, human biology, genetics, personal health, earth science or geology, weather, astronomy or space, electricity or magnetism, mechanics, heat, optics, chemistry atomic theory environmental science, and oceanography. As in the other core subjects, topics are described as major minor, review topics, or non-existent. In addition to topical coverage, other classroom indicators such as use of science experiments by teachers and students and the access, and quality of science equipment are also reported. History curriculum is reported in the areas of state history, U.S. or American history, world or western history, civics/government, geography, current events, ethics, and economics. All topics are rated by teachers as major topics, minor topics, review topics, or non-existent.

The National Assessment of Educational Progress (NAEP) also collects information from teachers on their classroom curriculum in selected subject areas in grades four, eight, and twelve. NAEP teachers report on specific topical areas taught in their class and on the teaching techniques that they use. Because the subject areas covered by the NAEP assessment vary, the specific topical areas that teachers report on change for each assessment. In

addition, NAEP teachers report on the level of students' exposure in the curriculum to selected assessed topics for each administration of NAEP.

In addition to NELS:88 and NAEP, two other NCES surveys have collected very limited information on opportunity to learn in elementary and secondary education. In 1991 the Fast Response Survey System (FRSS) conducted a survey on safe, disciplined, and drug-free schools which asked schools to report the number of hours that education on drug abuse is taught for each grade. The Schools and Staffing Survey (SASS) collected information in 1988 and 1991 on the amount of time elementary school teachers spend teaching the core subjects of English, mathematics, science, and social studies. Although some data items on course offerings and enrollments for 7th and 8th grade mathematics and science were field tested for the 1994 administration of SASS, these items had very low response rates and respondents had a great deal of difficulty filling them out, so they will not be included in the 1994 SASS.

Measurement of OTL in Planned New NCES Initiatives

Two planned new initiatives will add to the information that NCES currently collects on opportunity to learn in elementary and secondary education. The Early Childhood Longitudinal Survey of 1996 (ECLS 96) will follow longitudinally a cohort of kindergarten students. This cohort will provide NCES with its first ever look at the development and achievement of young children as they progress through elementary school. Although the exact content of the ECLS has not yet been determined, initial plans include collecting information on opportunity to learn in elementary grades. The information that will be

collected is likely to be similar to that collected in the teacher component of NELS:88. Teachers will likely be asked to report on topic coverage, content emphasis, and, especially, the teaching practices that they use to impart the information in the curriculum. This survey will fill a major gap in our current knowledge about content coverage, teaching practices, and the curriculum at the elementary school level.

Finally, NCES is sponsoring a project which we hope will improve our understanding and measurement of school processes. This project will examine the characteristics associated with quality schooling, but will go beyond the effective schools literature to look in-depth at classroom practices. The overall question that this project seeks to address is "What makes school a good place to be and what makes students good learners and good citizens?" The goal is to identify specific dimensions of schools or classrooms for which new measures are needed to supplement national surveys and ultimately provide much richer data on the ways in which schools differ. The project will investigate the feasibility of adding new measures, based on new data collection methodologies, either to existing surveys or to future surveys that gather school level data. As the first stage in this project, NCES identified nine dimensions which are important for understanding schools. Based upon discussions with experts in the field, it was determined that the dimension that should have the highest priority in the project is measurement of opportunity to learn.

The most innovative feature of the school quality project is NCES' commitment to go beyond traditional large-scale sample survey methodology into a closer marriage between qualitative methods and quantitative methods. Because we are interested in getting inside the "black box" of education, into understanding what happens in a classroom that promotes

learning, small scale case study research will be the models we will look to fine tune our understanding and measurement of classroom processes. NCES also views this project as a long-term commitment to improving our measurement of difficult constructs, such as opportunity to learn. We will not rush to put items on questionnaires just because we need to have something to show our constituents that we are trying to measure opportunity to learn. We are really going to try to tackle the more basic issues: What do we mean by opportunity to learn? What are its components? How can it best be measured? What current surveys, if any, are the most appropriate to serve as the vehicle for measuring OTL? How can case study research be integrated into NCES' current survey system?

Opportunity to learn was picked as a priority area for the school quality project because it was felt that 1) it is critical to the quality of the education that students receive, 2) it is likely to vary across different types of schools and even within schools across classrooms, 3) the existing research does not give a full picture of the impact of opportunity to learn on student outcomes (broadly defined), and 4) it was one of the more difficult to measure constructs considered. It seemed appropriate for a longer term research project to focus its initial activities on a concept that is likely to have very high payoff in terms of our understanding of school quality, yet is currently very difficult to measure (especially in large scale survey research).

The examination of opportunity to learn in the context of the school quality project will begin with an extensive literature review focusing on how opportunity to learn has been defined and measured in other research. This review will be comprehensive in that it will include small scale research as well as large research projects, and it will look at opportunity

to learn information as it is collected at all levels of the educational process--from school districts, schools, classroom teachers, students. The review of the literature will also include a compilation of data collection instruments that have been used in prior studies of opportunity to learn. The result of this first phase of the project will be a better understanding of the definition and measurement of opportunity to learn.

While literature reviews are beginning for other dimensions of school quality beginning in the Winter of 1993, the examination of opportunity to learn will continue with a pilot instrumentation and data collection phase. During this phase of the project, a data collection plan will be developed which will be shared with experts on opportunity to learn. This plan will include instruments that have been adopted or adapted from the ones identified in the literature review. We currently plan to attempt to pilot these instruments in some actual schools and classrooms in the spring of 1994.

Longer term plans for the school quality project include a systematic examination of how the measurement of the dimensions of school quality fit into the current NCES data collection system. Our plan is to integrate items on school quality into existing data collection efforts, whenever possible, or to propose new data collections if the current ones do not provide adequate vehicles for measurement of school quality dimensions. One example of the way in which school quality measurement could be integrated into existing data collections would be to use a large-scale sample survey, such as the Schools and Staffing Survey, as the frame for a systematic small sample of schools in which case studies could be conducted. This system would have the benefit of the wealth of background information collected in the large scale surveys, while using small scale research techniques,

such as teacher logs or observations, to measure school quality dimensions at the classroom level.

Summary

NCES has undertaken a systematic effort to improve its measurement of opportunity to learn and the relationship between the written and the implemented curriculum. Some of the NCES elementary/secondary surveys, such as NELS:88, collect extensive information on course content and topic coverage and emphasis in the eighth grade and throughout high school. NCES will also begin to collect some information on topic coverage at the elementary with the inauguration of the Early Childhood Longitudinal Study in 1996. Parallel with the collection of opportunity to learn in these ongoing and planned large scale survey systems, NCES has also initiated a longer term project, the school quality project, which will examine the measurement of opportunity to learn, and how reliable, high quality data on opportunity to learn can be collected with innovative data collection methodologies in the context of NCES current data collection system. Taken together, these efforts will help improve our understanding of opportunity to learn topics in elementary and secondary education, and the effects that opportunity, or lack of opportunity, have upon student learning and other student outcomes.

For More Information

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